



The University of Southern Queensland

## Course specification

| <b>Description: Systems Analysis and Design</b> |         |       |         |      |       |           |
|---|---------|-------|---------|------|-------|-----------|
| Subject   | Cat-nbr | Class | Term    | Mode | Units | Campus    |
| CIS   | 2000    | 58094 | 3, 2006 | EXT  | 1.00  | Toowoomba |

|                                   |        |
|-----------------------------------|--------|
| <b>Academic group:</b>            | FOBUS  |
| <b>Academic org:</b>              | FOB005 |
| <b>Student contribution band:</b> | 2      |
| <b>ASCED code:</b>                | 020305 |

### STAFFING

Examiner: Daniel Van Der Westhuizen

Moderator: Kristeen Casey

### REQUISITES

Pre-requisite: CIS1000

### RATIONALE

This is the initial systems course and it introduces students to the fundamental concepts and terminology used in business systems analysis and design by examining procedures, systems, the components of information systems, common business information systems, types of information systems, and organizational levels. Case studies are used to apply the concepts and techniques involved.

### SYNOPSIS

One of the major strands in the information technology field is that of systems analysis and design. The analysis of case studies requires effective listening and reading skills. The students will study analysis techniques and then design appropriate solutions. The design requires the production of accurate, understandable and efficient systems requirement documents using formats which will maximize effective communication. Some typical business information systems will be studied. A CASE product will be utilized.

### OBJECTIVES

The course objectives define the student learning outcomes for a course. The assessment item/s that may be used to assess student achievement of an objective is/are shown in parentheses after each objective. On successful completion of this course, students should be able to:

1. define and demonstrate an understanding of the fundamental concepts and terminology used in business systems analysis and design (Assignment, Examination)
2. identify the basic assumptions and controls involved in the analysis and design of typical business application (Assignment, Examination)

3. outline and demonstrate an appreciation of the functions and inter-relationships of typical business applications (Assignment, Examination)
4. develop competence in the definition and design of process models based on appropriate data models (Assignment, Examination)
5. demonstrate an appreciation of sound computer interface principles (Assignment, Examination)
6. effectively communicate ideas using tools and techniques of systems analysis and design (Assignment, Examination).

## TOPICS

| Description                                    | Weighting (%) |
|--|---------------|
| 1. Introduction to systems analysis and design | 0.50          |
| 2. Analysing the business case                 | 0.50          |
| 3. Requirements modeling                       | 0.50          |
| 4. Enterprise modeling                         | 40.00         |
| 5. Development strategies                      | 0.50          |
| 6. Data design                                 | 15.00         |
| 7. User interface, input and output design     | 0.50          |
| 8. System architecture                         | 0.50          |
| 9. Systems implementation                      | 0.50          |
| 10. Systems operation and support              | 0.50          |
| 11. Communication tools                        | 0.50          |
| 12. CASE tools                                 | 5.00          |
| 13. Financial analysis tools                   | 10.00         |
| 14. Project management tools                   | 10.00         |
| 15. Object-oriented tools                      | 15.00         |
| 16. Internet research tools                    | 0.50          |

## TEXT and MATERIALS required to be PURCHASED or ACCESSED

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at <http://bookshop.usq.edu.au> click 'Semester', then enter your 'Course Code' (no spaces).

Lahey, H (ed) 2000, *Information systems developers handbook: a road map for students*, University of Southern Queensland, Toowoomba, Queensland.

(This handbook is available on the USQ website at <http://www.usq.edu.au/faculty/business/departments/infosys/isdhandbook.htm>)

Shelly, GB, Cashman, TJ & Rosenblatt, HJ 2006, *Systems analysis and design*, 6th edn, Thomson Course Technology, Boston, Massachusetts.

(revised edition - this item will come packaged with VAW 7.5 which is NOT available separately)  
 Summers, J & Smith, B 2006, *Communication skills handbook: how to succeed in written and oral communication*, 2nd edn, John Wiley & Sons, Milton, Queensland.

## REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

Booch, G 1994, *Object-oriented analysis and design with applications*, 2nd edn, Benjamin/Cummings, Redwood City, California.

Date, CJ 2004, *An introduction to database systems*, 8th edn, Pearson/Addison-Wesley, Boston, Massachusetts.

Gore, M & Stubbe, JW 1994, *Contemporary systems analysis*, 5th edn, Business & Educational Technologies, Dubuque, Iowa.

Hawryszkiewicz, IT 2001, *Introduction to systems analysis and design*, 5th edn, Prentice Hall, Frenchs Forest, New South Wales.

Kendall, KE & Kendall, JE 2004, *Systems analysis and design*, 6th edn, Prentice Hall, Upper Saddle River, New Jersey.

Robinson, B & Prior, M 1995, *Systems analysis techniques*, International Thomson Computer Press, London.

Whitten, JL, Bentley, LD & Dittman, KC 2003, *Systems analysis and design methods*, 6th edn, McGraw-Hill, UK.

Wu, SY & Wu, MS 1994, *Systems analysis and design*, Western Publishing, Minneapolis/St Paul, Minnesota.

## STUDENT WORKLOAD REQUIREMENTS

| ACTIVITY       | HOURS |
|----------------|-------|
| Assessment     | 30.00 |
| Directed Study | 70.00 |
| Private Study  | 70.00 |

## ASSESSMENT DETAILS

| Description                   | Marks out of | Wtg(%) | Due date               |
|-------------------------------|--------------|--------|------------------------|
| ASSIGNMENT                    | 40.00        | 40.00  | 15 Jan 2007            |
| EXAM A MULTI-CHOICE QUESTIONS | 30.00        | 18.00  | END S3<br>(see note 1) |
| EXAM B SHORT-ANSWER QUESTIONS | 70.00        | 42.00  | END S3                 |

### NOTES

1. The examination is scheduled to be held in the end-of-semester examination period. Students will be advised of the official examination date for Exam (A and B) after the timetable has been finalised. The total working time for Exam (A and B) is 3 hours.

## IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:

If you are an international student in Australia, you are advised to attend all classes at your campus. For all other students, there are no attendance requirements for this course. However, it is the students' responsibility to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.
- 2 Requirements for students to complete each assessment item satisfactorily:

To satisfactorily complete an assessment item a student must achieve at least 50% of the marks. Students do not have to satisfactorily complete each assessment item to be awarded a passing grade in this course. Refer to Statement 4 below for the requirements to receive a passing grade in this course.
- 3 Penalties for late submission of required work:

If students submit assignments after the due date without prior approval then a penalty of 20% of the total marks available for the assignment may apply for each working day late.
- 4 Requirements for student to be awarded a passing grade in the course:

To be assured of receiving a passing grade a student must make a reasonable attempt in all of the weighted assessment items, achieve at least 50% for the examination and at least 50% of the total weighted marks available for the course.
- 5 Method used to combine assessment results to attain final grade:

The final grades for students will be assigned on the basis of the aggregate of the weighted marks obtained for each of the summative assessment items in the course.
- 6 Examination information:

This is a restricted examination. Candidates are allowed access to specific materials during the examination. The only materials that candidates may use in the examination for this course are (i) Writing materials: non-electronic and free from material which could give the student an unfair advantage in the examination; (ii) Translation dictionaries: with the Examiner's approval, candidates may, take an appropriate non-electronic translation dictionary into the examination. This will be subject to perusal and, if it is found to contain annotations or markings that could give the candidate an unfair advantage, it may be removed from the candidate's possession until the appropriate disciplinary action is completed; and (iii) calculators which cannot hold textual information (students must indicate on their examination paper the make and model of any calculator(s) they use during the examination).
- 7 Examination period when Deferred/Supplementary examinations will be held:

Any Deferred or Supplementary examinations for this course will be held during the next examination period.
- 8 University Regulations:

Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL <http://www.usq.edu.au/corporateservices/calendar/part5.htm>. Students should also read the Faculty of Business Guide to Policies and Procedures of the Faculty which can be found at the URL <http://www.usq.edu.au/handbook/current/buspolproc.html>.

## ASSESSMENT NOTES

- 1 Assignments: (i) The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the Examiner. (ii) Students must retain a copy of each assignment submitted for assessment. This must be produced within 24 hours if required by the Examiner. (iii) The Examiner may grant an extension of the due date of an assignment in extenuating circumstances. Students may apply for an extension through the DEC before the due date or by including an application with the submitted assignment after the due date. Such applications should be in writing and include supporting documentary evidence. The authority for granting extensions rests with the relevant Examiner. (iv) The Examiner will normally only accept assessments that have been written, typed or printed on paper-based media. (v) Students who do not have regular access to postal services or who are otherwise disadvantaged by these regulations may be given special consideration. They should contact the Examiner to negotiate such special arrangements. (vi) In the event that a due date for an assignment falls on a local public holiday in their area, such as a Show holiday, the due date for the assignment will be the next day. Students are to note on the assignment cover the date of the public holiday for the Examiner's convenience.
- 2 Course weightings: Course weightings of topics should not be interpreted as applying to the number of marks allocated to questions testing those topics in an examination paper.
- 3 Guidelines for assignments: Unless otherwise directed by the Examiner, all written and oral assignments submitted by students must conform to the guidelines laid out in the 'Communication skills handbook: how to succeed in written and oral communication' and the 'Information systems developers handbook'. Any work not prepared in accordance with these guidelines may be subject to penalty or requirement for resubmission.
- 4 Make-up work: Students who have undertaken all of the required assessments in a course but who have failed to meet some of the specified objectives of a course within the normally prescribed time may be awarded the temporary grade: IM (Incomplete - Make up). An IM grade will only be awarded when, in the opinion of the Examiner, a student will be able to achieve the remaining objectives of the course after a period of non-directed personal study.
- 5 Deferred work: Students who, for medical, family/personal, or employment-related reasons, are unable to complete an assignment or to sit for an examination at the scheduled time may apply to defer an assessment in a course. Such a request must be accompanied by appropriate supporting documentation. One of the following temporary grades may be awarded: IDS (Incomplete - Deferred Examination); IDM (Incomplete Deferred Make-up); IDB (Incomplete - Both Deferred Examination and Deferred Make-up).

## OTHER REQUIREMENTS

- 1 Learning resources: Prescribed texts and materials (see above); recommended reference materials (see above); printed Introductory Book, Study Book/s and Book/s of Selected Readings; and course Website accessible via USQConnect.
  - 2 E-mail and Internet access: Students will require access to e-mail and Internet access to USQConnect for this course.
-